

**DISK DRIVE HAVING A DISK INCLUDING A SERVO BURST PATTERN  
IN WHICH A PHASE DIFFERENCE BETWEEN RADIALY ADJACENT  
SERVO BURSTS IS LESS THAN 180 DEGREES**

**ABSTRACT**

A disk drive has a sampled servo system controller and a disk. The disk has a plurality a plurality servo burst fields, each including a first normal burst field, a first quadrature burst field, a second normal burst fields and a second quadrature burst field. A portion of the first quadrature burst field is circumferentially contiguous with the first normal burst field and spans a portion of a radial extent of the first normal burst field. The second normal burst field is radially aligned with and away from the first normal burst field and spans a portion of a radial extent of the first quadrature burst field. The second quadrature burst field is radially aligned with and away from the first quadrature burst field and spans a portion of a radial extent of the second normal burst field. The first normal burst field and the first quadrature burst field have a same first phase, the second normal burst field and the first quadrature burst field have a same second phase and the difference between the first phase and the second phase is less than 180 degrees.